

## Eawag Seminar Invitation

# Are some chemical contaminants planetary boundary threats?

Speaker **Prof. Michael McLachlan**  
*Stockholm University, Sweden*

When **March 8, 11.00 – 12.00 a.m.**

Where **Forum Chriesbach, room C20, Eawag Dübendorf**

Abstract In a landmark paper, Rockström et al. identified earth system processes of vital importance for the stability of the planet that are currently being destabilized by human activities. For these processes they defined stress indicators and determined planetary boundaries for these indicators that delineated the safe operating space for humanity; if these boundaries are crossed then we risk destabilizing the stable state of the planet that has given birth to human civilization. Rockström et al. considered “chemical pollution” to be a potential destabilizing factor, but they were unable to define a planetary boundary for it. In this presentation I will explore the planetary boundary concept from a chemical pollution perspective. I will describe how existing chemical pollutants are linked to the already defined planetary boundaries. Then I will discuss whether there could be other chemical pollutants that could threaten the earth system in different ways. What characteristics must a chemical have in order to be such a planetary boundary threat? What can we do to identify chemicals that are planetary boundary threats before it is too late and we have a planetary crisis? What management and governance challenges would a proactive strategy entail?